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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,242	01/26/2004	Yukiko Sasaki	46240	6683
20736 7590 09/05/2007 MANELLI DENISON & SELTER 2000 M STREET NW SUITE 700 WASHINGTON, DC 20036-3307			EXAMINER ZHENG, LI	
			ART UNIT 1638	PAPER NUMBER
			MAIL DATE 09/05/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/763,242	Applicant(s) SASAKI ET AL.	
	Examiner Li Zheng	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 11 and 14-22 is/are pending in the application.
- 4a) Of the above claim(s) 15-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 11 and 14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's amendment to claims 1, 3, 4, 6, 11 and 14 filed on 6/18/2007 is acknowledged. As a result, claims 1-8, 11, 14-22 are pending. Claims 15-22 are withdrawn from consideration. Claims 1-8, 11 and 14 are examined on the merits.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. The objection to the specification is withdrawn due to specification amendment. This application contains claims 15-22 drawn to an invention nonelected with traverse in Paper filed 9/25/2006. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.
4. The objections to claims 2-3, 5 and 14 are withdrawn.

Claim Rejections - 35 USC § 112

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5. Claims 1, 4, 5, 7, 8, 11, and 14 remain rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, for the reasons of record stated in the Office action mailed December 18, 2006. Applicants traverse in the paper filed June 18, 2007. Applicants' arguments have been fully considered but were not found persuasive.

In claim 1, the recitation "expression of both a polypeptide coding sequenceand a promoter....in a plant ... are repressed" is still confusing. "Expression of a promoter" is improper because a gene rather than a promoter can be expressed in a plant.

In claims 3 and 4, the recitation, "in a plant cell or a plant" in line 3, is redundant.

6. Claims 1-8, 11 and 14 remain rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the nucleotide sequence of SEQ ID NO: 2 and 9 copies of SEQ ID NO: 1 as light responsive elements in pea, as well as SEQ ID NO: 3 together with several variants made by deletions (as illustrated in PL1-PL4 of figure 4) as light responsive promoters in pea does not reasonably provide enablement for those sequences above being light responsive elements or promoters in any plant, or all the sequences containing SEQ ID NO: 1 as light responsive sequences or promoters in pea, or SEQ ID NO: 2 alone as light responsive promoter in pea. The specification does not enable any person skilled in the art to which it pertains with which

it is most nearly connected, to make/use the invention commensurate in scope with these claims, for the reasons of record stated in the Office action mailed December 18, 2006. Applicants traverse in the paper filed June 18, 2007. Applicants' arguments have been fully considered but were not found persuasive.

Applicants argue that Example 9 support that a 12-bp cis-element of SEQ ID NO: 2 alone is sufficient to confer light repressibility on the expression of a gene placed downstream of the element (response, page 10, 5th paragraph). However, the rejection is based on that SEQ ID NO: 2 alone does not constitute a functional promoter but rather functions as a light responsive element. Therefore, as shown in Example 9, a minimal promoter needs also to be included to in order to be a light responsive promoter.

Applicants further argue that Mitsuvara et al. describe that each chimeric promoter, which had different numbers of tandem repeats of cis-element from the 5' upstream region of the CaMV 35S promoter promoter, respectively, had promoter activity (response, paragraph bridging pages 10-11). However, the cis-element of Mitsuvara et al. are dramatically different from SEQ ID NO: 1 in length, structure and function. The cis-element of Mitsuvara et al. is about 300 bp whereas the SEQ ID NO: 1 is only 12 bp. The cis-element of Mitsuvara et al. do not share sequence homology to SEQ ID NO: 1 and functions as an general enhancer, rather than a light responsive element. Therefore, the teaching from Mitsuvara et al. is not applicable to the instant cis-element of SEQ ID NO: 1.

The Applicants further argue that the cited reference of Ngai et al. describes that cis-element affecting the expression of asparagine synthetase (AS) gene whose transcription is negatively regulated by light and the cis-element were found in nuclear extracts of tobacco, peas and Arabidopsis and therefore be universal factors involved in light-activated repression (response, paragraph bridging pages 11-12). However, cis-element is not found in the cis-element of Ngai et al. Further, there is no evidence that the SEQ ID NO: 1 is found in homologous genes in any other plant, or that the binding factors for SEQ ID NO: 1 are found in nuclear extract of any other plant. Therefore, it is doubtful that the cis-element of instant invention would function similarly in other plants.

Claim Rejections - 35 USC § 102

7. Claims 1-3, 7 remain rejected under 35 U.S.C. 102(b) as being anticipated by Jansen et al. or Okubo et al. or Richards et al., for the reasons of record stated in the Office action mailed December 18, 2006. Applicants traverse in the paper filed June 18, 2007. Applicants' arguments have been fully considered but were not found persuasive.

Applicants argue that the DNA fragment containing the nucleotide sequence of SEQ ID NO: 1 of the present claimed invention is clearly differentiated from the nucleic acid disclosed in Jansen et al. or Okubo et al. or Richards et al. in chemical structure and length. However, the nucleotide sequence of Jansen et al. or Okubo et al. or Richards et al. comprises SEQ ID NO: 1, therefore the property as being able to form a

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light-repressible promoter in a plant when linked to a promoter is inherent to the sequences of Jason et al., Okubo et al. and Richards et al., regardless to the differences in the length and structure.

Applicant further argue that Jansen et al. or Okubo et al. or Richards et al. do not teach SEQ ID NO: 1 is a core sequence. However, Applicant may discover a new feature for SEQ ID NO: 1, the SEQ ID NO: 1 itself is nevertheless disclosed by Jansen et al. or Okubo et al. or Richards et al. Any property associated with SEQ ID NO: 1 would be exhibited by the sequence of the references including being a core sequence.

Applicant finally argue that neither of the references teach "an isolated DNA fragment is characterized by expressions of both a peptide-coding sequence placed downstream of the DNA fragment and a promoter operatively linked to said peptide-coding sequence in a plant cell or a plant are repressed by irradiation with white light at 70 umole/m2/sec or irradiation with red light for 2 minutes". However, Applicants only claim a isolated DNA fragment comprising SEQ ID NO: 1, rather than a chimeric promoter.

Claim Rejections - 35 USC § 102/103

8. Claims 4-6 and 8 remain rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Richards et al., for the reasons of record stated in the Office action mailed December 18, 2006. Applicants traverse in

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the paper filed June 18, 2007. Applicants' arguments have been fully considered but were not found persuasive.

Applicants present same argument as discussed above regarding to the rejection 35 U.S.C. 102(b). For the same reason as discussed above as well as the failure of Applicants to provide evidence that genomic region of Richards et al. is not a promoter as claimed, the rejection is maintained.

Summary

No claim is allowed.

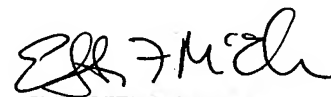
THIS ACTION IS MADE FINAL. Applicants is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li Zheng whose telephone number is 571-272-8031. The examiner can normally be reached on Monday through Friday 9:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ELIZABETH MCELWAIN
PRIMARY EXAMINER